

GENERAL NOTES

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT FOR HVAC INCLUDING A/C EQUIPMENT, CONTROLS, CONTROL WIRING, PLENUMS, CONDENSATE DRAIN AND REFRIGERATION SYSTEMS, SPECIALTIES, ANCHORING/SUPPORTING OF EQUIPMENT, AUXILIARY MATERIALS AND ACCESSORIES AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE OF THE WORK AND BECOME FAMILIAR WITH ALL AVAILABLE INFORMATION REGARDING THE LOCATION OF EXISTING FACILITIES. FAILURE OF THE CONTRACTOR TO FULLY INFORM HIMSELF OF ALL EXISTING CONDITIONS WILL NOT BE CAUSE FOR ADDITIONAL COMPENSATION.

ALL EQUIPMENT AND MATERIALS USED IN THIS INSTALLATION SHALL BE NEW, OF APPROVED QUALITY AND MANUFACTURE AND, UNLESS OTHERWISE NOTED, SHALL BE STANDARD CATALOG ITEMS OF THE VARIOUS MANUFACTURERS. EACH COMPONENT OF THE WORK SHALL BE COMPLETE, CONNECTED AND CAPABLE OF SATISFACTORY FUNCTIONAL OPERATION.

FOLLOW REQUIREMENTS OF THE FLORIDA BUILDING CODE 2001, REGULATIONS, ORDINANCES, ETC., OF THE STATE, COUNTY, AND/OR MUNICIPALITY, IN WHICH THE CONSTRUCTION IS LOCATED, AND ANY OTHER ENTITY HAVING JURISDICTION OVER THIS WORK.

ALL EQUIPMENT SHALL FIT THE ALLOTTED SPACE AND SHALL LEAVE REASONABLE ACCESS ROOM FOR SERVICE AND REPAIRS. GREATER SPACE AND ROOM REQUIRED BY SUBSTITUTED EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AND AT HIS EXPENSE AND MEETING THE APPROVAL OF THE OWNER.

IF THE CONTRACTOR DISCOVERS ANY DISCREPANCIES BETWEEN EQUIPMENT DIMENSIONS AND SPACE ALLOTTED THEREFORE, HE SHALL NOTIFY THE OWNER IN WRITING AND SHALL NOT PROCEED WITH THE WORK UNTIL HE HAS RECEIVED WRITTEN INSTRUCTIONS FROM THE OWNER.

THE CONTRACTOR SHALL DO NO CUTTING THAT MAY IMPAIR STRENGTH OF BUILDING CONSTRUCTION. NO HOLES, EXCEPT FOR SMALL SCREWS, MAY BE DRILLED IN BEAMS OR OTHER STRUCTURAL MEMBERS WITHOUT OBTAINING PRIOR APPROVAL OF THE COWNER.

ALL ROTATING EQUIPMENT SHALL BE STATICALLY AND DYNAMICALLY BALANCED. UNLESS OTHERWISE SPECIFIED, THE VIBRATION ALLOWANCE IN THE UNITS SHALL NOT EXCEED THE UPPER LIMITS AS ESTABLISHED BY THE EQUIPMENT MANUFACTURER.

THE CONTRACTOR SHALL FURNISH ALL ELECTRICAL WORK ASSOCIATED WITH MECHANICAL EQUIPMENT, INCLUDING ELECTRICAL CONTROLS, SWITCHES, CONTRACTORS AND STARTERS FOR ALL EQUIPMENT ITEMS REQUIRING SAME. ALL ELECTRICAL WORK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE CURRENT NATIONAL ELECTRICAL CODE.

UNLESS OTHERWISE INDICATED, METAL FASTENERS AND RELATED PARTS SHALL BE OF ALUMINUM OR STAINLESS STEEL AND SHALL BE OF ADEQUATE STRENGTH FOR THE PURPOSE INTENDED.

THE CONTRACTOR SHALL GUARANTEE ALL WORK, MATERIALS, EQUIPMENT, ETC. AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF THE FINAL ACCEPTANCE. IN ADDITION TO THE GUARANTEE, THE CONTRACTOR SHALL PROVIDE THE PERFORMANCE WARRANTIES AS SPECIFIED FOR THE EQUIPMENT IN THE VARIOUS SECTIONS.

MECHANICAL NOTES

REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DIMENSIONS OF BUILDING ELEMENTS. COORDINATE DUCTWORK AND PIPING WITH ARCHITECTURAL, PLUMBING, ELECTRICAL DRAWINGS. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES AS REQUIRED.

DUCT AND PIPING LOCATIONS ARE APPROXIMATE AND SHALL BE ADJUSTED SLIGHTLY AS REQUIRED TO SUIT EXISTING OR FIELD CONDITIONS.

COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT PRIOR TO ORDERING EQUIPMENT.

EXACT LOCATION OF ALL CEILING DIFFUSERS AND GRILLES SHALL BE CORDINATED WITH LIGHTING LAYOUT AND CEILING LAYOUT.

ALL CEILING/WALL MOUNTED AIR DISTRIBUTION DEVICES LOCATED IN INACCESSIBLE LOCATIONS SHALL HAVE BALANCING DEVICE LOCATED SUCH THAT BALANCING OF SYSTEM CAN BE ACCOMPLISHED AFTER THE CEILING IS IN PLACE.

DUCT DIMENSIONS SHOWN, ARE INSIDE CLEAR DIMENSIONS.

AIR HANDLER UNITS THERMOSTATS SHALL BE MOUNTED 5'-0" ABOVE FINISHED FLOOR.

ALL BRANCH OF FLEXIBLE DUCT SHALL BE SIZED TO MATCH THE AIR DISTRIBUTION DEVICE SERVED UNLESS OTHERWISE NOTED AND SHALL BE 8FT LENGTH MAXIMUM.

PROVIDE COPPER TRAPPED CONDENSATE DRAINS PIPING FROM AHU'S FACTORY DRAIN PANS TO FRENCH DRAINS. INSTALL PER FBC2001, SECTION 307.

ALL ROTATING EQUIPMENT SHALL BE STATICALLY AND DYNAMICALLY BALANCED, UNLESS OTHERWISE SPECIFIED.

ALLOWANCE IN THE UNITS SHALL NOT EXCEED THE UPPER LIMITS AS ESTABLISHED BY THE EQUIPMENT MANUFACTURER.

SUPPORT MAIN DUCTS PER FIG. 4-4 SMACNA HVAC DUCT CONSTRUCTION STANDARD.

SUPPORT FLEXIBLE AND PROVIDE DUCT TEES AND LATERALS CONNECTION PER FIGS. 3-9 AND 3-10 OF THE LATEST EDITION SMACNA DUCT CONSTRUCTION STANDARD METAL AND FLEXIBLE.

PROVIDE VIBRATION ISOLATION TO ALL EQUIPMENT AS PER MANUFACTURER RECOMMENDATIONS TO ELIMINATE ANY EQUIPMENT NOISE FROM BEING HEARD.

ALL REFRIGERANT HIGH SIDE PIPING TO 300 PSIG, LOW SIDE TO 150 PSIG. AFTER TESTING EVACUATE SYSTEM TO 28 " MERCURY GAUGE PRESSURE WITH VACUUM PUMP. HOLD 25 HOURS WITH PUMP OFF. BREAK VACUUM WITH REFRIGERANT.

EQUIPMENT/MATERIALS NOTES

INSULATE ALL REFRIGERANT SUCTION PIPING WITH 3/4" CLOSED CELL POLYETHYLENE PREMOULDED PIPE INSULATION, WITH AN APPROVED PIPE AND SMOKE JACKET. PAINT ALL EXPOSED INSULATION WITH TWO COATS OF WHITE LATEX PAINT.

REFRIGERANT PIPING : PIPE SHALL BE HARD TEMPERED, SEAMLESS COPPER TUBING TYPE L-ARC CONFORMING TO ASTM SPECIFICATION B-88. MANUFACTURERS OR TRADEMARK AND TYPE OF TUBING SHALL BE IDENTIFIED AT 3-FOOT INTERVALS.

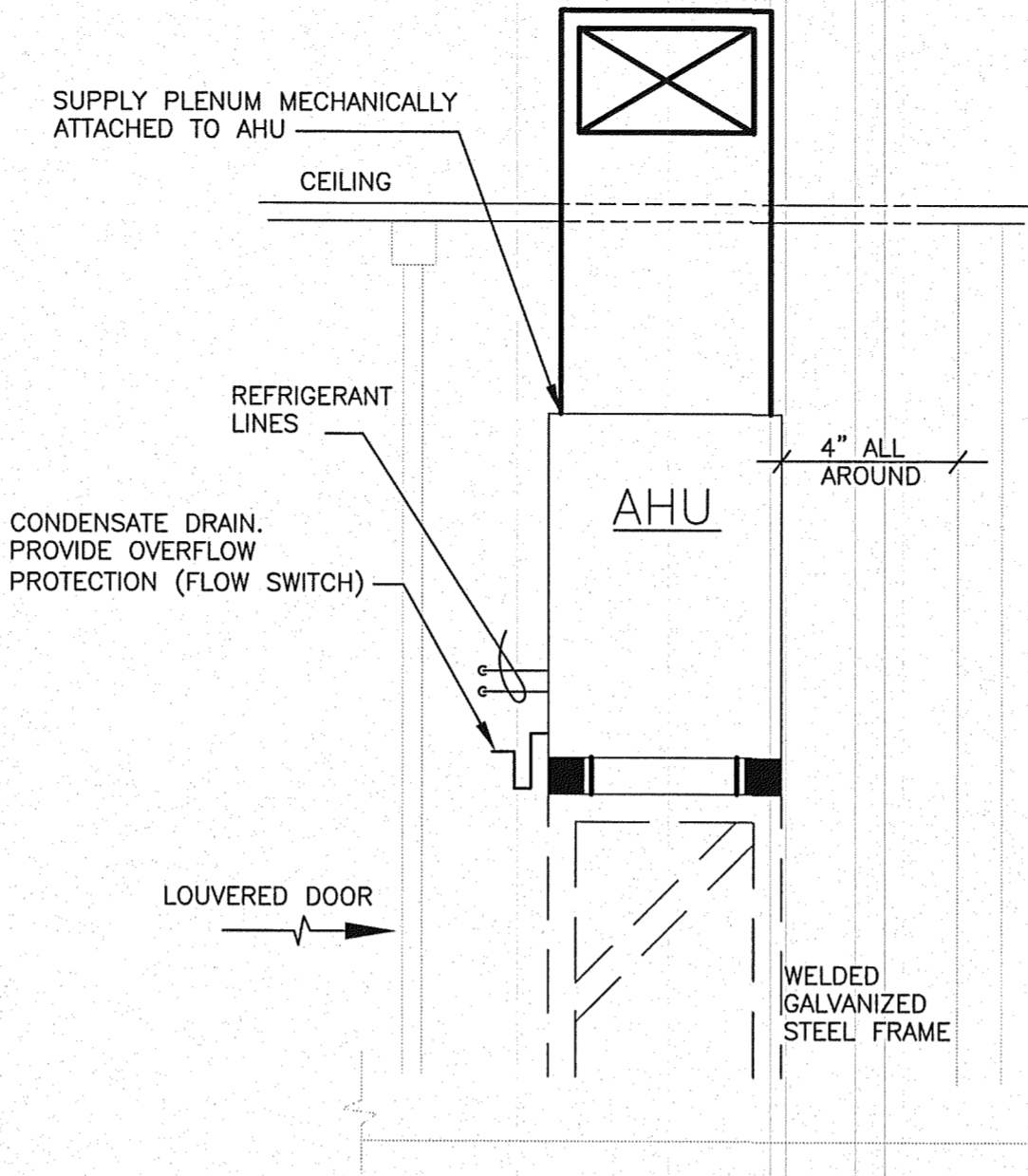
PIPE SLEEVES : PROVIDE GALVANIZED SHEET METAL, 22 GAUGE SLEEVES FOR PIPES PASSING THROUGH WALLS OR FLOORS BEFORE POURING CONCRETE. PLASTIC SLEEVES AS MANUFACTURED BY PROSET OR EQUAL ARE PERMITTED. ALL SLEEVES SHALL BE LARGE ENOUGH TO ALLOW FULL THICKNESS OF INSULATION THROUGH SLEEVES FOR INSULATED PIPING, AND FOR TWO LAYERS OF 30 LB. FELT WRAPPING AROUND UN-INSULATED PIPING.

SUPPLY AND RETURN DUCTWORK SHALL BE CONSTRUCTED OF FIBERGLASS DUCT BORD, DENSITY 1-1/2"THICK GLASSFIBER, DESIGNED, CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA'S LOW PRESSURE/VELOCITY DUCT MANUAL. ALL DUCT JOINTS SHALL BE SEALED AND TAPED, U.L. RATED; R-6 INSULATION, AND AS SHOWN ON DRAWING.

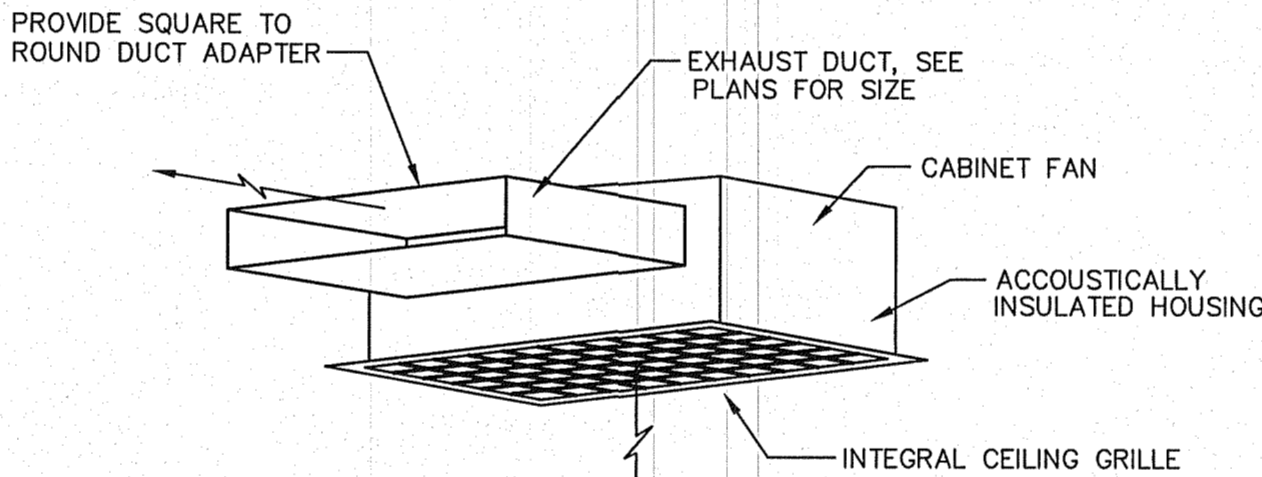
FLEX DUCTWORK: ALL FLEX DUCT SHOWN TO BE FORM "M-I" METALLIC INSULATED. PROVIDE CORE OF CORROSION RESISTANT REINFORCING WIRE, INSULATED WITH U.L. RATED; R-6 FIBERGLASS FLEXIBLE INSULATION AND COVERED WITH A VAPOR BARRIER. PROVIDE SPIN COLLAR WHERE FLEXIBLE DUCT IS CONNECTED TO RECTANGULAR DUCTWORK.

GRILLES, REGISTERS, AND DIFFUSERS:ALUMINIUM CONSTRUCTION COMPLETE WITH SPECIFIED ACCESSORIES, OPPOSED BLADE DAMPER (OBD) AND BAKED WHITE ENAMEL FINISH.

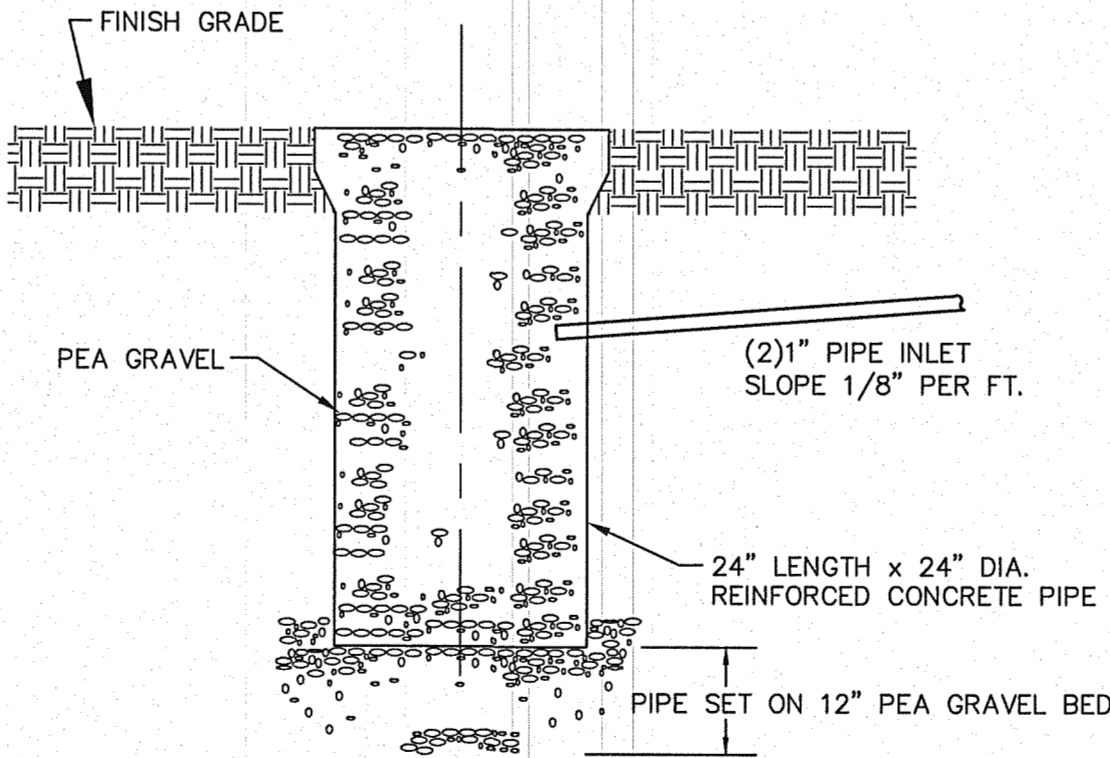
ALL EQUIPMENT, INSULATION MATERIALS, ADHESIVE, COATING, AND OTHER ACCESORIES SHALL HAVE A FIRE HAZARD RATING NOT TO EXCEED 25 FOR FLAME SPREAD AND 50 FOR FUEL CONTRIBUTED AND SMOKE DEVELOPED.



AHU MOUNTING DETAIL (W/LOUVERED DOOR)
N.T.S.



CEILING EXHAUST FAN DETAIL
N.T.S.



FRENCH DRAIN DETAIL
N.T.S.

FOR LOCATION REFER TO PLUMBING SITE PLAN.

HEAT PUMP SPLIT UNITS SCHEDULE

DESIGNATION	AHU-1/CU-1	AHU-2/CU-2
AREA SERVED	SEE PLAN	SEE PLAN
TRANE CU MODEL	2TTX4018	4TTX4024
TRANE AHU MODEL	TWE018P13	TWE030P13
SYSTEM RATING		
TOTAL/SENSIBLE CAPACITY MBTUH	18/13.6	24/18.1
INDOOR AIRFLOW CFM	600	900
MCA-MOCP	10-15	11-15
MINIMUM SEER	14.00	14.00
ELECTRIC SERVICE	208-230/1/60	208-230/1/60
OUTDOOR UNIT (CU)		
COMPRESSOR RLA-LRA	7.2-42	8.3-62
OUTDOOR FAN FLA-HP	0.6-1/15	0.9-1/8
HEATING CAPACITY @ 47 F TO 70 F (MBTUH)	17.0	17.0
INDOOR UNIT (AHU)		
No. MOTORS - HP	1-1/8	1-1/4
FAN MOTOR FLA- LRA	0.9-1.6	1.7-2.6
FILTER TYPE	LOW VELOCITY	LOW VELOCITY
SUCTION (IN. OD)	PER MANUFACTURER RECOMMENDATION	
LIQUID (IN. OD)		

DESIGN BASED ON TRANE AC SYSTEM. OTHER MANUFACTURERS MEETING THE SPECIFIED REQUIREMENTS AC SYSTEM PERFORMANCE WILL BE ALLOWED

NOTES AND ACCESSORIES:

UNITS RATED IN ACCORDANCE WITH ARI STANDARDS 210/240 OR 360/270. PROVIDE WITH THERMAL EXPANSION VALVE, SIGHT GLASS, LIQUID LINE FILTERDRYER AND MULTI-USER SERVICE VALVES. PROVIDE HIGH AND LOW PRESSURE CONTROL AND OVER TEMPERATURE PROTECTION. PROVIDE 1 YEAR MANUFACTURER WARRANTY (PARTS AND LABOR) AND EXTENDED 5 YEARS COMPRESSOR WARRANTY PARTS ONLY. PROVIDE COMPRESSOR WITH CRANKCASE HEATER. PROVIDE WEATHERPROOF ELECTRIC CONTROL AND SINGLE SIDE SERVICE ACCESS. PROVIDE FACTORY CONDENSER COIL PRE-COAT FOR CORROSION RESISTANCE. PROVIDE INTERNAL SPRING ISOLATION FOR SUPPLY FAN. PROVIDE MOTOR OVERLOAD AND THERMAL PROTECTION. PROVIDE FACTORY PROGRAMMABLE THERMOSTAT TO MATCH CAPACITY STAGES. PROVIDE STARTER AND DISCONNECTS SWITCH BY ELECTRICAL DIV. 16 FOR CU, COORDINATE PRIOR TO PURCHASING. PROVIDE FACTORY MOUNTED STARTER AND DISCONNECTS SWITCH FOR AHU, MOUNT CONDENSING UNITS ON 4" HOUSEKEEPING PAD. CONDENSING UNITS SHALL BE SUPPORTED/PROTECTED TO WITHSTAND CATEGORY 5 STORMS WINDS AND WIND-DRIVEN STORM DEBRIS. PROVIDE FOR AHU'S FRAME/BASE WITH SLOT FOR FILTER CONSTRUCTED OF WELDED GALVANIZED STEAL ANGLES. PROVIDE 4"MIN. CLEARANCE AROUND A.H.U. AND DUCTWORK. PROVIDE DRAIN FAN FLOW SWITCH TO SHUT-DOWN THE AHU WHEN OVERFLOW.

AIR DISTRIBUTION SCHEDULE

AIR DEVICE	TYPE	NECK SIZE	MATERIAL	DESIGN BASED		FRAME	NC
				MANUFACTURER	CATALOG #		
A	SUPPLY DIFUSSER	SEE PLAN	ALUMINUM	TITUS	250AA	SURFACE	MAX. 20
B	RETURN GRILLE	SEE PLAN	ALUMINUM	TITUS	350F	SURFACE	MAX. 20
C	SUPPLY SLOT	SEE PLAN	ALUMINUM	TITUS	N-4-D	SURFACE	MAX. 20
D	RETURN SLOT	SEE PLAN	ALUMINUM	TITUS	ML-39	SURFACE	MAX. 20

- DESIGN BASED ON TITUS AIR DEVICES. OTHER MANUFACTURERS MEETING THE SPECIFIED PERFORMANCE WILL BE ALLOWED
- FINAL COLOR SELECTION SUBJECT TO ARCHITECT APPROVAL
- PROVIDE ADAPTER AS REQUIRED TO CONNECT FLEX DUCT AND DIFFUSER NECK SIZE.
- PROVIDE SPIN-IN COLLAR WITH VOLUME DAMPER AT TRUNK TO FLEX DUCT CONNECTION.
- PROVIDE TYPICAL 4-WAY DIFFUSION, 2-WAY OR 3-WAY ONLY WHERE INDICATED ON PLANS.

HVAC LEGEND

SYMBOL	DESCRIPTION
CD	CEILING DIFFUSER
TG	TRANSFER AIR GRILLE.
CU	CONDENSING UNIT AIR COOLED
AHU	AIR HANDLING UNIT
RTU	ROOFTOP UNIT
Ⓢ	PROGRAMMABLE THERMOSTAT
⊠	CEILING DIFFUSER.
⊞	EXHAUST OR RETURN AIR DEVICE
—	WALL MOUNTED AIR DEVICE
Ⓢ	ROUND DUCT (SIZE (DIAMETER) IN INCHES)
Ⓢ	DUCT TRANSITION
—	FIRE DAMPER

NOT ALL THE SYMBOL ARE USED IN THIS PROJECT.

INSULATION R VALUES INFORMATION.

EXTERIOR WALLS	R-5
ADJACENT WALLS	R-5
CEILING	R-30
DUCTWORK	R-6

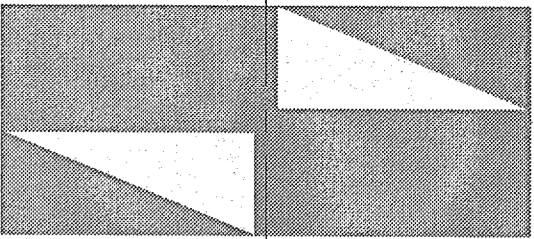
FAN SCHEDULE

DESIGNATION	EF-1
FAN TYPE	CLG. MOUNTED
AIR FLOW (CFM)	50
STATIC PRESSURE (IN. WG)	0.25
FAN MOTOR (W)	46
GREENHECK MODEL	SP-6
EXHAUST DUCT SIZE	4"

NOTES:

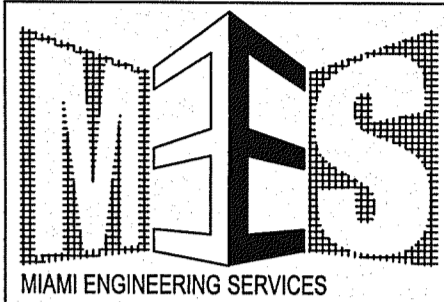
- ALUMINUM CONSTRUCTION
- ALUMINUM GRILLE
- INTEGRAL GRAVITY BACKDRAFT DAMPER
- DISCONNECT SWITCH
- RUNS WITH LIGH
- ROOF CAP W/SCREEN.

DESIGN TEAM:



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REMODELING TO:
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MANAGEMENT:

#	REVISIONS	DATE

DATE : FEBRUARY 8, 2011

PROJECT No. : 040-11

DRAWN BY: L.P.

CHECKED BY: J.P.

SHEET TITLE:

HVAC NOTES,
DETAILS &
SCHEDULES

SHEET No:

M-4